

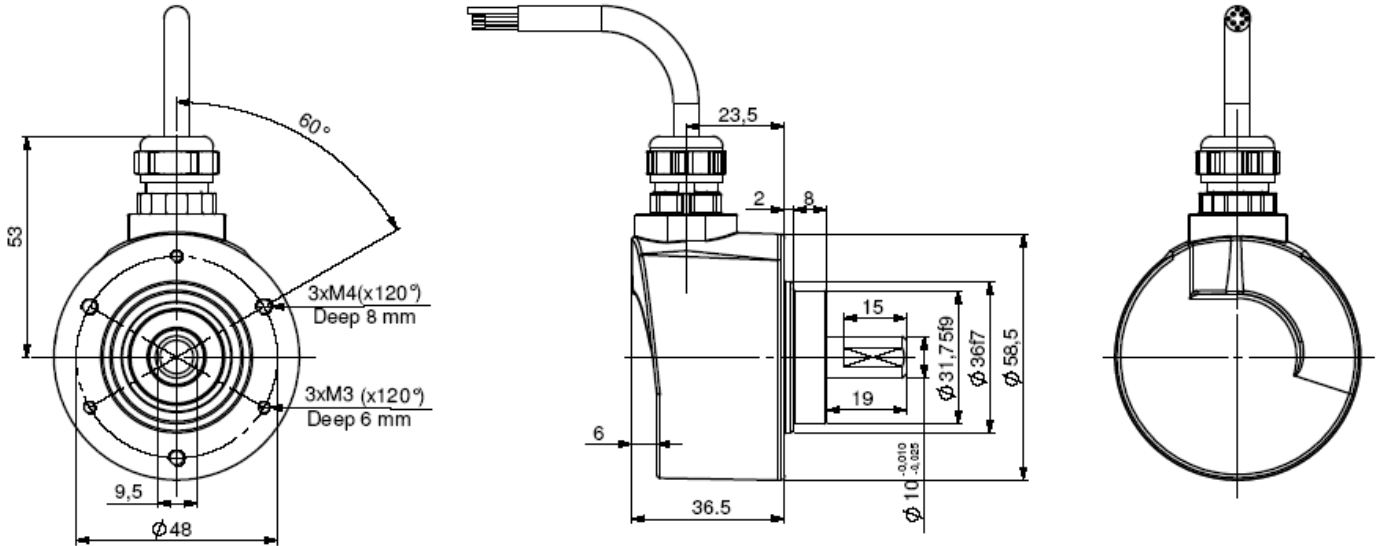
# PARALLEL SINGLE TURN ABSOLUTE ENCODER, CHM5 RANGE CHM5

CHM5, the new generation of parallel absolute single turn encoders:

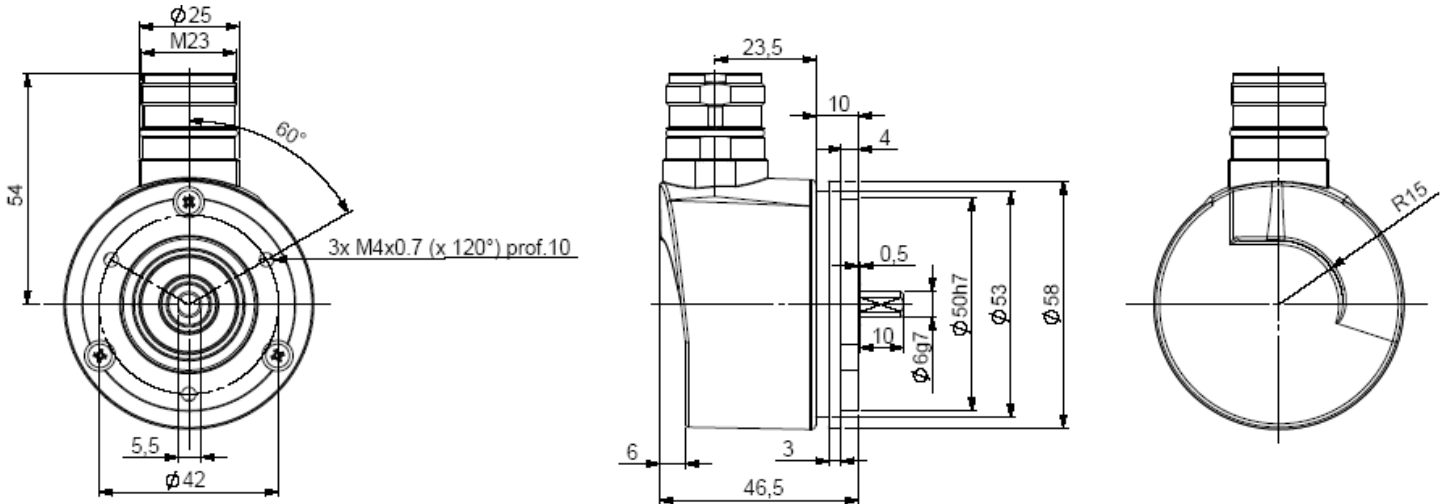
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 option with a sealing flange
- High resolutions possibility: up to 15 bits (Gray or binary)
- Universal electronic circuits from 5 to 30 Vdc
- High performances in temperature -20°C to 90°C (option -40°C to 100°C)
- Standard DIRECTION entry, LATCH option



CHM5\_10 connection C3R (radial cable)



CHM5\_06 connection CPR / C1R (radial M23), flange 9500/003\* mounted on the body



\* Accessory to be ordered separately

Material	Cover : zinc alloy	Shocks (EN60068-2-27)	≤ 500 m.s <sup>-2</sup> (during 6 ms)
	Body: aluminium	Vibrations (EN60068-2-6)	≤ 100 m.s <sup>-2</sup> (10 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 61000-6-4, EN 61000-6-2
Bearings	6 000 serie	Isolation	1 000 Veff
Maximum loads	Axial : 50 N	Encoder weight (approx.)	0,300 kg
	Radial : 100 N	Operating temperature	- 20 ... + 90 °C (encoder T°)
Shaft inertia	≤ 1.10 <sup>-6</sup> kg.m <sup>2</sup>	Storage temperature	- 40 ... + 100 °C
Torque	≤ 4.10 <sup>-3</sup> N.m	Protection(EN 60529)	IP 65 (IP67 with flange option)
Permissible max. speed	12 000 min <sup>-1</sup>	Theoretical mechanical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> / F <sub>radial</sub> )	
Continuous max. speed	9 000 min <sup>-1</sup>	25 N / 50 N : 99	50 N / 100 N : 12



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## CONNECTION

	color	13 bits + DIRECTION CP or C3	14 bits + DIRECTION C1
1	white WH	0V	0V
2	brown BN	+Vcc	+Vcc
3	green GN	D0	D0
4	yellow YE	D1	D1
5	grey GY	D2	D2
6	pink PK	D3	D3
7	blue BU	D4	D4
8	red RD	D5	D5
9	black BK	D6	D6
10	violet VT	D7	D7
11	white/brown WH/BN	D8	D8
12	white/green WH/GN	D9	D9
13	white/yellow WH/YE	D10	D10
14	white/grey WH/GY	D11	D11
15	white/pink WH/PK	D12	D12
16	white/blue WH/BU	DIRECTION	D13
17	White/red WH/RD	/	DIRECTION

Example, 10 bits encoder: only MSB will be supplied (D3 to D12)

**ORDERING REFERENCE** (Contact the factory for special versions, ex: special flanges, connections, electronics...)

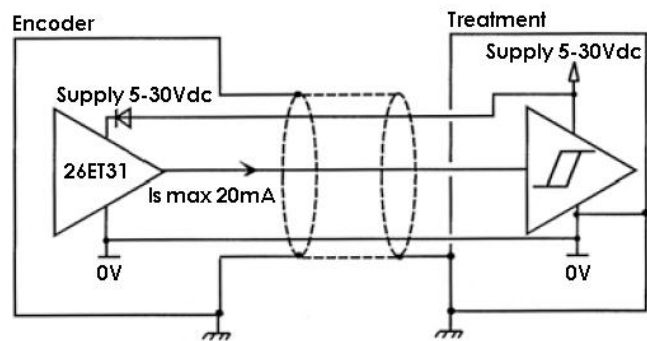
	Shaft Ø	Supply	Output stage	Code	Resolution	Connection	Orientation
<b>CHM5</b>	<b>10</b> : 10mm	<b>P</b> : 5 to 30Vdc	<b>C5</b> : push pull 5 to 30Vdc	<b>B</b> : Binary  <b>G</b> : Gray	Power of 2:  <b>1</b> : 1 bit to <b>14</b> : 14 bits  Max: <b>15</b> bits Consult us	<b>CP</b> : M23 16 pins 13 bits + direction	<b>R</b> : radial
	<b>C1</b> : M23 17 pins 14 bits + direction						
	<b>06</b> : 6mm					<b>C3</b> : cable gland + 16 wires cable	Example : <b>R020</b> : radial cable 2m
<b>CHM5</b> _	<b>10</b> //	<b>P</b>	<b>C5</b>	<b>G</b> //	<b>13</b> //	<b>C3</b>	<b>R020</b>

### Monitoring function available as option:

- of the code coherence
- of the LED internal regulated current loop
- of temperature range with 2 limits

Consult us

## ELECTRONIC



Power supply: 5 to 30Vdc  
Consumption without load: 100mA max  
Current output per channel: Is=20mA max  
Level "0" (Is=20mA) max:  $V_{ol} = 0,5Vdc$   
Level "1" (Is=20mA) min:  $V_{oh} = Vcc - 2,5Vdc$

Protection against short circuits and inversion of polarity

### DIRECTION

CW increasing code: DIRECTION pin to +Vcc  
CCW increasing code: DIRECTION pin to 0Vdc

### LATCH (option)

Active data on the outputs: LATCH pin to 0V  
Frozen data on the outputs: LATCH pin to +Vcc

Consult us for the connection of an encoder with this option